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- A method of creating an amorphous two-dimensional pattern of interlocking twodimensional geometrical shapes having at least two opposing edges which can be tiled together, said method comprising the steps of:
  - (a) specifying the width  $x_{max}$  of said pattern measured in direction x between said opposing edges;
  - (b) adding a computational border region of width B to said pattern along one of said edges located at the x distance  $x_{max}$ ;
  - (c) computationally generating (x,y) coordinates of a nucleation point having x coordinates between 0 and  $x_{max}$ ;
- 10 (d) selecting nucleation points having x coordinates between 0 and B and copying them into said computational border region by adding  $x_{max}$  to their x coordinate value;
  - (e) comparing both the computationally generated nucleation point and the corresponding copied nucleation point in said computational border against all previously generated nucleation points; and
  - (f) repeating steps (c) through (e) until the desired number of nucleation points has been generated.
  - 2. The method of Claim 1, wherein said pattern includes at least two pairs of opposing edges, each pair of opposing edges being capable of being tiled together.
  - 3. The method of Claim 1, further comprising the steps of:
    - (g) performing a Delaunay triangulation on said nucleation points; and
    - (h) performing a Voronoi tessellation on said nucleation points to form said two-dimensional geometrical shapes.
  - 4. The method of Claim 1, wherein said pattern includes two mutually orthogonal coordinate directions x and y, and wherein nucleation points are copied into a computational border in each coordinate direction.
  - 5. The method of Claim 1, wherein said step of comparing said nucleation points includes a control factor to control the degree of randomness of said pattern.
  - 6. The method of Claim 1, wherein the width B of said computational border is at least equal to the width of three columns of hypothetical hexagons.



- 7. The method of Claim 1, wherein said method includes the step of generating twodimensional geometrical shapes from said nucleation points.
- 8. The method of Claim 7, wherein said method includes the step of deleting twodimensional geometrical shapes resulting from copied nucleation points.
- 9. The method of Claim 7, wherein said method includes the step of saving twodimensional geometrical shapes resulting from copied nucleation points.
- 10. The method of Claim 7, wherein said method includes the step of generating a physical output of the finished pattern of two-dimensional geometrical shapes.